

REMARKS

In response to the final Office Action mailed January 6, 2009, the new Assignee (i.e., Nuance Communications, Inc.) respectfully requests reconsideration. Claims 21-23 were previously pending in this application. By this amendment, claims 21-23 are canceled without prejudice or disclaimer. Claims 24 and 25 have been added. As a result, claims 24 and 25 are pending for examination, both of which are independent. No new matter has been added.

Rejections Under 35 U.S.C. §103

The Office Action rejects claims 21-23 under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Publication No. 20020032564 (Ehsani) in view of U.S. Publication No. 20030195739 (Washio). While the Assignee does not agree with the rejection, the Assignee has canceled claims 21-23 and added claims 24 and 25 to expedite allowance of this case. Claims 24 and 25 are believed to patentably distinguish over the alleged combination of Ehsani and Washio, as discussed in further detail below.

A. Overview of Embodiments

Systems have been developed that allow designers of speech recognition application call flows to build a call flow by selecting grammars from a list of existing or pre-built grammars (paragraph [0002]). This permits call flow designers to generate a call flow using grammars that the designer need not create and define themselves, thus making call flow design more efficient (paragraph [0018]). However, because the designer may not have built a selected grammar, the designer may have no specific technical knowledge of the grammar (paragraph [0002]). Therefore, without inspecting the grammar, a designer may not know what utterances are defined as valid in the grammars being used in the call flow (paragraph [0020]). Nevertheless, the designer may assign the grammar to define valid user responses to a given prompt and specify that a subsequent prompt be provided when the user response matches a valid response in the grammar (paragraph [0021] and FIGS. 3A, 3B and 4).

A designer may want to define a special response option that also defines a valid response to the given prompt and specify that a different prompt be provided when the user response matches the special response option (paragraph [0022] and FIGS. 3A, 3B and 4). A conflict may arise if the

special response option is already defined in the grammar (paragraph [0021] and FIGS. 3A, 3B and 4). For example, when the call flow is in operation, a user response may match the special response, but because the user response is defined in the grammar as well, the incorrect prompt may be provided to the user (paragraph [0021] and FIGS. 3A, 3B and 4).

Some embodiments address this issue by allowing existing grammars to be used along side designer defined response options without conflict (paragraph [0018]). For example, some embodiments include a system and method for generating a call flow wherein, when at least one grammar and a response option are associated with the same prompt and trigger different prompts when matched with a user response, the system automatically searches the at least one grammar for the response option and, if found, presents the prompt triggered by the response option even though the user response is defined in the grammar (paragraph [0021] and FIGS. 3A, 3B and 4). Thus, the system avoids conflicts and allows the designer to combine existing grammars with designer defined response options without requiring the user to know what valid responses are defined in the existing grammars (paragraph [0018]).

The foregoing summary is provided to assist the Examiner in appreciating some applications for various aspects of the invention. However, this summary may not apply to each of the independent claims, and the language of the independent claims may differ in material respects from the summary provided above. Thus, the Assignee respectfully requests that careful consideration be given to the language of each of the independent claims and that each be addressed on its own merits, without relying on the summary provided above. In this respect, the Assignee does not rely on the summary provided above to distinguish any of the claims over the prior art. Rather, the Assignee relies only upon the arguments provided below.

B. Overview of Ehsani

Ehsani is directed to creating recognition grammars for voice-controlled user interfaces (paragraph [0219]). The recognition grammars are created by consulting a thesaurus formed from analyzing and aggregating large amounts of conversational data into equivalent classes (paragraph [0022]). In Ehsani, the thesaurus is a “key element” in generating recognition grammars for voice-interactive dialogue systems and the majority of Ehsani is devoted to describing how the thesaurus is built. The disclosure that relates to call flow design begins on page 11 of Ehsani.

In particular, paragraph [0219] begins a description of how the thesaurus, once generated, can be used to create recognition grammars for voice controlled user interfaces. When defining a user request, the thesaurus allows a call flow designer to specify a single valid utterance for each type of user request (paragraph [0222]). A network expander then takes the sample user response specified in the call-flow design and automatically retrieves alternative linguistic variants from the thesaurus (paragraph [0224]). It should be appreciated that what Ehsani describes involves using a thesaurus to create a comprehensive grammar of valid user responses. However, Ehsani has nothing to do with resolving conflicts that may arise when at least one grammar and a response option both define valid responses to the same prompt, but trigger different prompts when matched with a user response.

C. Overview of Washio

Washio is directed to updating a grammar with new grammar data obtained from monitoring user utterances in an existing interactive voice response (IVR) system or pseudo-system (Abstract and paragraphs [0007]-[0011]). Similar to Ehsani, Washio is directed to building a comprehensive grammar to handle the wide variety of ways in which a user might respond to an IVR system by collecting large amounts of speech data ([0007]-[0011]). Washio does not, however, discuss call flow design and is (as is Ehsani) completely silent with respect to addressing concerns that may arise when at least one grammar and a response option both define valid responses to the same prompt, but defined to trigger different prompts when matched with a user response.

D. Claims 24 and 25 Distinguish Over Ehsani and Washio

Claims 24 and 25 recite, respectively, a method for generating a speech recognition application call flow from a call flow representation of the speech recognition application call flow specified by a designer using a user interface, and at least one computer readable medium encoded with instructions that perform such a method when executed. The method comprises adding a representation of a first prompt to the call flow representation and adding representations of at least one grammar and a response option to the call flow representation, both of which define valid responses to the first prompt. The method further comprises adding a representation of a second prompt to be presented to the user should the user respond to the first prompt with one of the valid

responses defined in the at least one grammar and a third prompt to be provided to the user should the user respond to the first prompt with the response option.

The method further comprises automatically generating the speech recognition application call flow from the call flow representation such that *if the response option is defined as a valid response in the at least one grammar, the third prompt is presented to the user instead of the second prompt when the user responds to the first prompt with the response option.*

As discussed above, Ehsani and Washio describe various ways to build a comprehensive grammar to be used in an IVR system, but do not discuss generating a speech application call flow from a call flow representation of the call flow with at least one grammar and an option response both defining valid responses to a first prompt. As a result, neither Ehsani or Washio disclose or suggest “automatically generating the speech recognition application call flow from the call flow representation such that if the response option is defined as a valid response in the at least one grammar, the third prompt is presented to the user instead of the second prompt when the user responds to the first prompt with the response option,” as recited in claims 24 and 25. Therefore, claims 24 and 25 patentably distinguish over Ehsani and Washio, either alone or in combination, and are in allowable condition.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance to discuss any outstanding issues relating to the allowability of the application.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Assignee hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. N0484.70566US00.

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Respectfully submitted,
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